REMARKS

Summary of Amendments

Paragraph [0068] has been amended to correct text garbled as an artifact of this application having been filed via the USPTO's original version of its Electronic Filing System. (Similar revisions to the specification were made in Applicants' amendment dated April 4, 2005, and the Office entered those revisions.)

Independent claims 1 and 15 have been amended to add limitations set forth in the specification as filed, but not previously incorporated into any of the claims. Claim 6 was canceled in Applicants' May 18, 2006 reply to the previous Office action, dated January 18, 2006.

Now in this RCE-accompanying submission, claims 1-5 and 7-15 are thus pending.

Support for Claim Amendments

No new matter has been added. Support for the recitation in claims 1 and 15 that the resistive heating element is patterned in a circuit having a pattern spacing of 0.1 mm or more, and the recitation that the surface roughness of the susceptor object-retaining side is 5 μm or less in *Ra* can be found respectively in Paragraphs [0052] and [0068] of the specification as filed.

Claim Rejections – 35 U.S.C. § 103

Claims 1-5 and 7-15; Ito WO '717, in view of Nozaki et al. '681, Chen '949, and Fure et al. '507

Claims 1-5 and 7-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Int'l. Pat. App. Pub. No. WO 02/084717 (EP Pat. App. Pub. No. 1 391 919 being an English counterpart) to Ito, in view of U.S. Pat. No. 5,264,681 to Nozaki et al., U.S. Pat. No. 6,423,949 to Chen, and U.S. Pat. No. 6,753,507 to Fure et al.

The first paragraph detailing the rejections in effect asserts that *Ito* anticipates certain of the subject matter of independent claims 1 and 15, combined with the subject matter of claims 2, 3 and 4, while acknowledging that *Ito* fails disclose, teach, or suggest: i) the lead circuit being of resistance smaller than the resistance of the resistive-heating-element circuit, ii) the shaft being of thermal conductivity lower than

the thermal conductivity of the susceptor ceramic, and iii) the frontside of the susceptor having a planarity of 0.5 mm or less.

Then to allege prior-art disclosure of these features i), ii) and iii) as recited in claims 1 and 15, the Office respectively cites *Nozaki et al.*, *Chen*, and *Fure et al.*, meanwhile in effect asserting that *Nozaki et al.* also discloses the subject matter of claims 9, 10, 11 and 12; that *Chen* discloses the subject matter of claim 8; and that *Fure et al.* discloses the subject matter of claim 5, as well as that of claims 8, 9, 10 and 11.

Notwithstanding whether the Office has made a proper *pima facie* case of a motivation to combine the teachings of *Nozaki et al.*, *Chen*, and *Fure et al.* with *Ito* in each of the rejection instances—and therefore not acquiescing in the § 103 rejections here addressed—Applicants have amended claims 1 and 15 to add limitations such that Applicants now claim ceramic susceptors whose combination of elements and features is not, Applicants respectfully submit, disclosed, taught, or suggested in any of the prior art of record.

Claims 1 and 15 now each recite that the resistive-heating-element circuit "is patterned in to have a pattern spacing of 0.1 mm or more", and that the object-retaining frontside of the susceptor has "a surface roughness of 5 μm or less in *Ra*."

It is noted that *Ito* is silent as to pattern spacing of the resistive heating element. Paragraph [0130] of Ito (EP 1 391 919) does note, "The width of the resistance heating elements in the ceramic substrate is preferably 5 to 20 μm." And Paragraph [0154] mentions, "When the area resistivity is less than 0.1 Ω/□, the resistance heating element pattern must be made to be a very small width, such as a width of about 0.1 to 1 mm, in order to ensure the amount of generated heat." Nevertheless, Applicants point out that "pattern width" is a term of art that is utterly different from "pattern spacing"; the pattern *width* of the resistive heating element is its overall width stretching from its radially inward to its radially outward side.

Accordingly, Paragraph [0154] of *Ito* addresses the apparently unusual, and therefore likely hypothetical and undesirable, case in which the resistive heating elements are so thin as to have a resistivity less than 0.1 Ω/□. If that were the case, *Ito* seems to say, then the radial span of the *entire* heating-element circuit—of each the individual resistive heating elements 12a, 12b and 12c in Fig. 1 of *Ito*, for example—would have to be about 0.1 to 1 mm.

It is also noted that *Ito* and indeed any of the prior art of record, is silent as to number of heating-element pattern lines per radial unit width.

Applicants point out their discovering that, as noted in Paragraph [0052] of the specification, patterning the resistive heating element in a circuit having a pattern spacing of 0.1 mm or more prevents shorting between the patterned circuit lines, while, as noted in Paragraph [0068], making the surface roughness of the susceptor object-retaining side be 5 μm or less in *Ra* minimizes the generation of particles loosened from the object-retaining due to friction between the susceptor and the object it carries.

Applicants discovered that when a ceramic susceptor according to the present invention is installed in a semiconductor or liquid-crystal manufacturing apparatus, the prevention of shorting and the minimization of particle generation uniquely made possible by their inventive susceptor ensures enhanced reliability of the semiconductor or liquid-crystal manufacturing apparatus.

Accordingly, Applicants courteously urge that this application is in condition for allowance. Reconsideration and withdrawal of the rejections is requested. Favorable action by the Examiner at an early date is solicited.

Respectfully submitted,

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